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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,981	09/22/2000	George A. Burnett	2909	1090

7590 12/20/2001

Joseph N Hosteny
Niro Scavone Haller & Niro
Suite 4600
181 West Madison Street
Chicago, IL 60602

EXAMINER

HUANG, SIHONG

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 12/20/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/667,981

Applicant(s)

BURNETT ET AL.

Examiner

Sihong Huang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In line 1 of the abstract, "an modified" should read --a modified--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 is vague and indefinite because an end period is missing.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siebold et al. (U.S. Pat. No. 4,420,706) or Hackett (U.S. Pat. No. 4,042,845) in view of Haertl (U.S. Pat. No. 4,987,597) or Marren et al. (U.S. Pat. No. 5,222,050).

Regarding claims 1 and 13, Siebold et al or Hackett disclosed an noise or sound device comprising: a piezoelectric transducer (col. 3, lines 20-24 of Siebold or 12 of Hackett) and a sound-amplifying housing (sound chamber 66 and 68 and col. 4, lines 17-20 of Siebold or the Helmholtz chamber 11 and col. 3, lines 40-55 of Hackett), said housing includes a front face (14

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of Hackett or the surface where the hole is formed). The only difference between claims 1 and 13 and the device of Hackett or Siebold is that the front face of Hackett's or Siebold's unit is not provided with a water resistant, sound permeable barrier. However, as taught by either Marren (col. 1, lines 28-39) or Haertl (col. 3, lines 11-32), it is extremely well known that a barrier formed of polytetrafluoroethylene is sound permeable but water-impermeable, and can be applied to a transducer housing. In fact, such water resistant and sound permeable barriers are so well known, a person with ordinary skill can buy them under the Trademark name GORE-TEX. They are also sold by W.L. Gore & Associates, Inc. Therefore, they are also commercially available. The advantage of providing such barriers is water resistant or waterproof, and generally able to protect the driver elements or transducer element from moisture and other contaminants. Since a person with ordinary skill would have recognized that adding such barriers will allow the device of either Siebold or Hackett to resist water for damaging the transducer element or other elements inside the housing, and to protect those elements from moisture and other contaminants, it would have been extremely obvious to an artisan at the time of the invention to apply the barrier as taught by either Marren or Haertl to the device of Hackett or Siebold in order to add the advantage as described above.

Regarding claim 2, the barrier of Marren or Haertl is formed of polytetrafluoroethylene.

Regarding claims 3-5, whether attaching the barrier to the front face by a sonic weld, a hot melt or silicone adhesive is merely a matter of engineering design. Furthermore, all these mounting methods are extremely well known and would have been an obvious modification to the modified device mentioned above.

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5. Claims 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siebold et al. (U.S. Pat. No. 4,420,706) or Hackett (U.S. Pat. No. 4,042,845) in view of Haertl (U.S. Pat. No. 4,987,597) or Marren et al. (U.S. Pat. No. 5,222,050) as applied to claims 1-5 and 13 above, and further in view of Press (U.S. Pat. No. 6,105,214).

Regarding claim 6, the modified device of Siebold or Hackett and Marren or Haertl differs from claim 6 in that it does not show a water resistant, hydrophobic fastener for mating the housing. However, as evidenced by Press, providing a hydrophobic fastener for water resistant is extremely well known (col. 1, lines 5-25). A person with ordinary skill would have easily recognized that if one wants to protect his/her sound device from water or moisture and other contaminants, one can easily apply any well known type of water resistant material (such as the one taught by Press) to cover the sound device (such as the one shown by Siebold or Hackett) in order to take the advantage as described above. Therefore, it would have been extremely obvious to coat the housing of either Siebold or Hackett with any type of well known water resistant material including those shown by Press for the purpose of protect the device from water or moisture and other contaminants.

Regarding claims 7-9 and 12, the modified device as described above will have both the sound permeable barrier and fastener. As disclosed in claims 1, 2 and 13 above, using polytetrafluoroethylene as housing component is extremely well known in the art and would have been an obvious modification to the above modified device.

Regarding claims 10 and 11, both Hackett and Siebold clearly illustrated that the housing has at least one aperture. Also, whether to form an aperture or a grill would have been an

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obvious design choice. Furthermore, a housing has a hole or grill is extremely well known in the art and would have been an obvious modification to the modified device mentioned above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art references to Shields (U.S. Pat. No. 5,196,755), Lee (U.S. Pat. No. 5,218,634), Massa (U.S. Pat. No. 4,028,504), Rollins et al. (U.S. Pat. No. 4,931,765), Nakashima et al. (U.S. Pat. No. 4,700,177), Freadman (U.S. Pat. No. 5,550,921) and Bost (U.S. Pat. No. 4,413,198) are cited to show other piezoelectric transducers.

7. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Or:

(703) 872-9314, (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

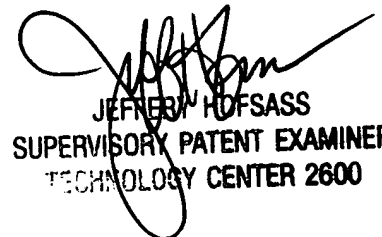
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sihong Huang whose telephone number is (703) 305-3966.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery Hofsass, can be reached on (703) 305-4717.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is (703) 306-0377.


JEFFERY HOFSSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

S. Huang

December 14, 2001